

## **REMARKS**

### **I. INTRODUCTION**

Claims 4-13, 15-17, and 30 are pending in the application. By this Amendment, claims 1-3, 14, and 18-29 are canceled without prejudice or disclaimer. Also, by this Amendment, new claim 30 is added and claims 4-13 and 15-17 are amended. In view of the foregoing amendments and following remarks, the Applicants respectfully submit that the application is in condition for allowance and request a notice stating the same. Reconsideration is respectfully requested.

### **II. INFORMATION DISCLOSURE STATEMENT**

On page 2 of the Office Action dated May 25, 2006, the Examiner stated that the Information Disclosure Statements (IDS) filed October 23, 2003, and May 10, 2004, failed to comply with 37 C.F.R. § 1.98(a)(3). In the response filed August 25, 2006, the Applicants respectfully pointed out that the documents cited in the foregoing IDS's should have been considered (*see* Section II, pages 6-7). The Final Office Action dated November 3, 2006, failed to indicate that the documents cited in these IDS's had been considered. Accordingly, the Applicants again request that the documents be considered and that an initialed copy of the listed documents be attached to the next Office Action. The listed documents include: DE 2754877, DE 2146024, DE 2442230, DE 2220147, DE 2234386, and a foreign non-patent literature authored by M. Jaecker.

### **III. CLAIM REJECTIONS UNDER 35 U.S.C. § 112**

On page 2 of the Office Action, claim 17 is rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. By this Amendment, claim 17 is amended to recite that "a melting pressure before entry to the extrusion die does not exceed approximately 700-1500 bar." That is, the phrase "is between" has been replaced by the original language --does not exceed--. Accordingly, the rejection is believed to be rendered moot. Reconsideration and withdrawal of the rejection are respectfully requested.

#### IV. CLAIM REJECTIONS UNDER 35 U.S.C. § 103

On pages 2-4 of the Office Action, claims 1-17 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 3,979,488 to Greenhalgh et al. ("Greenhalgh") in view of Official Notice taken by the Examiner. The rejection is respectfully traversed. Nevertheless, in the interest of expediting prosecution, claims 1-3 and 14 are hereby canceled, thus rendering the rejection moot with regard to these claims. New claim 30 is added and reconsideration and withdrawal of the rejection is respectfully requested.

"Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined." *Graham v. John Deere*, 383 U.S. 1, 148 U.S.P.Q. 459 (1966).

"Often, it will be necessary . . . to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue. *To facilitate review, this analysis should be made explicit.*" *KSR Int'l v. Teleflex, Inc.*, 550 U.S. \_\_\_\_ (April 30, 2007) (emphasis added).

New claim 30 recites:

A method for extruding a peroxide crosslinked polymer tube, comprising:

supplying a mixture to an extruder, the mixture comprising: a peroxide crosslinkable polymer, a crosslinking agent, and a stabilizing agent, wherein the peroxide crosslinkable polymer has a crystallite melting point and a crosslinking temperature;

*heating the mixture in the extruder with an external heating unit* to a temperature above the crystallite melting point of the polymer but below the crosslinking temperature of the polymer;

*controlling the temperature of the mixture in the extruder with the external heating unit and an internal cooling unit;*

continuously feeding the mixture from the extruder to an extrusion die; and

heating the mixture in the extrusion die above the crosslinking temperature of the polymer to effect at least a partial crosslinking of the polymer in the extrusion die. (emphasis added).

Thus, claim 30 recites that the mixture in the extruder is heated by an external heating unit and that the temperature of the mixture in the extruder is controlled with the external heating unit and an internal cooling unit. According to the disclosure, for example, “[t]he temperature of the polymer in the extruder can be precisely determined and controlled by the induction of heat from the exterior or the extraction of heat from the interior” and “[t]he quality of the finished parts can also be improved in this manner.” ¶ 0012. Furthermore, “[d]ue to the controlled, gentle heating of the polymer in the extruder, a good degree of homogenization of the polymer can be achieved. The loads in the extruder can also be reduced because unintended cross-linking can be avoided.” ¶ 0038.

On page 3 of the Office Action, the Examiner explicitly states that Greenhalgh “does not teach controlling the temperature in an extruder using a heating/cooling unit.” The Applicants agree that Greenhalgh does not teach this feature. Nevertheless, the Office Action takes Official Notice that “temperature control of extruders by internal or external heating/cooling means is well known in the extrusion art” and, thus, it would have been obvious to one having ordinary skill in the art to modify Greenhalgh accordingly. The Applicant respectfully disagrees and submits that the Office Action fails to establish a *prima facie* case of obviousness.

Specifically, Greenhalgh certainly does not teach any cooling unit, in particular, an *internal* cooling unit for temperature control of the polymer in the extruder. Any effect on the temperature of the polymer in the extruder is accomplished through mechanical working thereof and there is no indication that any cooling unit was contemplated in Greenhalgh. Moreover, the citation to U.S. Patent No. 4,797,242 to Fukuda *et al.* in the “Response to Arguments” section on page 4 of the Final Office Action for the proposition that “temperature control of an extruder by use of external heating elements and water cooling is well known in the extrusion art” is misplaced, especially in view of the fact that the purpose of the water cooling described in Fukuda is not disclosed, nor is such water cooling necessarily due to an “internal cooling unit.” Based on the teachings of the cited documents and the purported reasoning set forth in the Final Office Action, it is respectfully submitted that it would not have been obvious to include a cooling unit, particularly an *internal* cooling unit, to control a temperature of a mixture in an extruder in conjunction with an external heating unit.

Therefore, claim 30 is believed to be allowable over the cited documents of record. Claims 4-13 and 15-17 depend from claim 30 and are submitted as being allowable for at least the same reasons. Reconsideration and withdrawal of the rejections are respectfully requested.

Furthermore, with specific regard to at least claims 7-9, 13, and 17, the Applicants respectfully submit that neither Greenhalgh nor the Examiner's taking of Official Notice teaches or suggests the recited process-specific temperatures. Therefore, Greenhalgh, even if modified according to the Examiner's Official Notice, fails to teach or suggest all the claim features. Reconsideration and withdrawal of the rejections are respectfully requested.

**V. CONCLUSION**

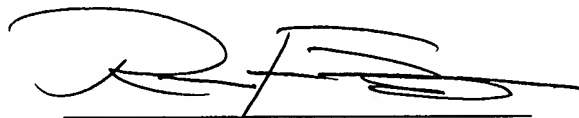
All of the stated objections and grounds of rejection are believed to have been properly traversed or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. Applicant believes that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is hereby invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment is respectfully requested.

Respectfully submitted,

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